

REMARKS

The present amendment is submitted in response to the Office Action dated June 26, 2003, which set a three-month period for response, making this amendment due by September 26, 2003.

Claims 1-16 are pending in this application.

In the Office Action, the oath or declaration was objected to as defective for not including the prior foreign application serial number. Claim 1 was rejected under 35 U.S.C. 112, sixth paragraph. Claims 1 and 16 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,101,790 to Takasu et al. Claims 2-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Takasu et al in view of U.S. Patent No. 6,520,149 B2 to Kukubo et al.

Turning first to the objection to the oath/declaration, the Applicants will file a corrected oath or declaration within the next 45 days from the filing of this amendment.

With regard to the rejection of claim 1 under Section 112, sixth paragraph, claim 1 has been amended to delete the objected-to phrase and amended to add a new step a) of "providing at least one knock sensor that generates a knock sensor signal". The original steps a) through d) were reordered as steps b) through e), respectively.

Looking now at the substantive rejections of the claims, the Applicants respectfully disagree that the cited references anticipate or make obvious the present invention.



In the Takasu patent, Figure 2 shows a knock sensor 1, which produces a knock signal, which is conducted to a comparator after filtering in a filter 2. There, the knock signal is compared with a reference value, which likewise is conducted to the comparator 5. In Takasu's Figure 4, the signal of the knock sensor is designated with C and the reference value is indicated with B. Thus, always when the value of the sensor signal exceeds the reference value, a corresponding impulse 4D is produced. This signal is further compared, as described in the figure. Each instance of exceeding of the reference value is designated as pulse Kp. The number of these impulses Kp is then evaluated. As shown in step 506 in Figure 7 and described in column 5 in Takasu, if no knock impulse occurred, the reference value Vth is reduced in step 509. When only one knock impulse Kp occurred, the reference value remains the same (column 5, lines 40-42). When two or more knock impulses Kp occurred, the reference value in step 508 increases (column 5, lines 45-50).

Nowhere in the Takasu reference is it suggested that the increase of this reference value is limited in any manner by a permitted reference level range or a gradient. The only suggestion of a possible limiting is found in column 4, which discloses that the maximum possible voltage is limited to 5 Volts and accordingly, with a bit width of 8 bits, a minimum subdivision is 19.5 mV. (column 4, line 67 through column 5, line 1). Thus, it does not operate as a permitted range for the reference level or as a gradient.



Because Takasu fails to disclose the limitation of a reference value as a function of a permitted range or a gradient, this reference cannot be seen as anticipatory of the present invention as defined in claim 1.

Likewise, the Kukubo reference, which is combined with Takasu in support of the rejection under Section 103, fails to disclose or suggest to the practitioner a limitation of a reference value in dependence of a permitted range or a gradient. Thus, the practitioner could not be lead to the present invention by combining the references as proposed.

Thus, for the reasons set forth above, the Applicants respectfully submit that claims 1-16 are patentable over the cited references. The Applicants further request withdrawal of the rejections under 35 U.S.C. 102 and 103 and reconsideration of the claims as herein amended.

It is noted that the Priority Document filed is apparently Ser No. 100 43 501.7. Applicant is not claiming priority of this application. Applicant has claimed priority of German Application Ser. No. 100 43 498.3, and a certified copy of this document shall be filed in due course.

In light of the foregoing arguments in support of patentability, the Applicants respectfully submit that this application stands in condition for allowance. Action to this end is courteously solicited.

Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.



Respectfully submitted,



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